(54) Title: METHOD TO EVALUATE WHETHER A TIME DELAY IS BETTER THAN A TIME LIMIT
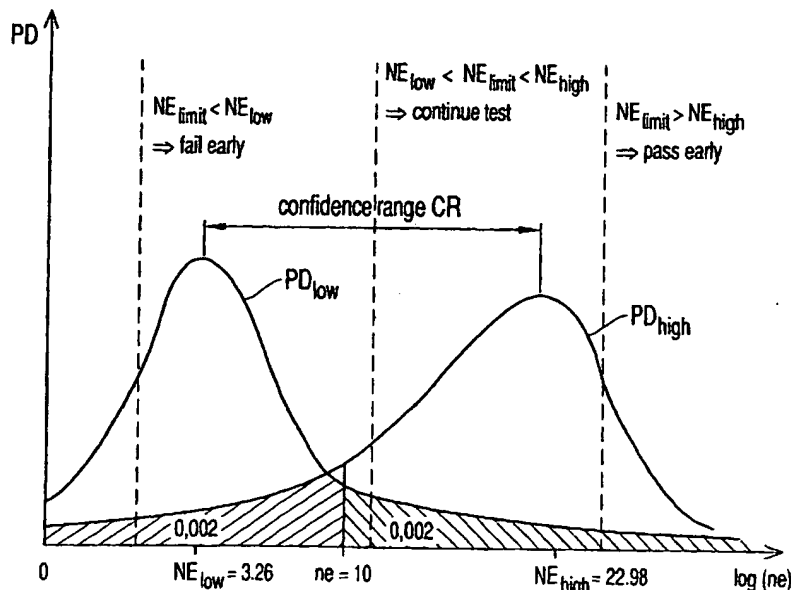
(57) Abstract: A method for testing the time delay error ratio ER of a device against a maximal allowable time delay error ratio ER_{limit} with an early pass and/or early fail criterion, whereby the early pass and/or early fail criterion is allowed to be wrong only by a small probability D. ns time delays TD of the device are measured, thereby ne bad time delays of these ns time delays TD are detected. PD_{high} and/or PD_{low} are obtained, whereby PD_{high} is the worst possible likelihood distribution and PD_{low} is the best possible likelihood distribution containing the measured ne bad time delays with the probability D. The average numbers of erroneous bits NE_{high} and NE_{low} for PD_{high} and PD_{low} are obtained. NE_{high} and NE_{low} are compared with $NE_{limit} = ER_{limit}$ ns. If NE_{limit} is higher than NE_{high} or NE_{limit} is lower than NE_{low} the test is stopped.